

DIELECTRIC RESONATOR DEVICE, COMMUNICATION FILTER, AND
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ABSTRACT OF THE DISCLOSURE

A dielectric resonator device includes two dielectric resonators resonating in first and second resonant modes and a partitioning plate which partitions the two dielectric resonators. Slits S are provided in the partitioning plate. A magnetic loop of the first resonant mode (TE01δz mode) is directed along the length of the slits S. The partitioning plate is also provided with a conductor loop consisting of first and second conductor loop portions that are coupled to magnetic fields of the second resonant mode (TE01δy mode). Accordingly, the coupling of the second resonant mode between the two dielectric resonators can be suppressed by the coupling of a leakage of the magnetic fields passing through the slits S and the coupling of the magnetic fields by the provision of the conductor loop.